

### **REMARKS / ARGUMENTS**

The present application includes pending claims 1-43. Claims 1, 9, 15, 20-23, 25, 28, 34, 38-39 and 41 have been amended to further clarify the claim language and to further prosecution of the present application. The Applicant points out that the amendments to the claims are supported by, for example, Figs. 10-13 and related descriptions of the specification. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 1-5, 8-12, 14-18, 20-24, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over USPP 2002/0141441 ("Neumann"), in view of USP 5,918,040 ("Jarvis"). Claims 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis and in view of USP 6,219,624 ("Russ"). Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, Russ and in view of well known prior art (MPEP 2144.03). Claims 6, 13 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, and further in view of MPEP 2144.03. Claims 7 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, MPEP 2144.03, and further in view of USPP 2002/0186754 ("Kawai"). Claims 28-43 are rejected for the same rationale as used for claims 1-27. The Applicant respectfully traverses these rejections at least for the

reasons previously set forth during prosecution and at least based on the following amendments and remarks.

**I. Summary of Applicant's Telephone Conference with the Examiner**

On 9/7/2010, the Applicant had conducted a telephone conference with the Examiner based on the proposed amendments to claim 1. Pursuant to the telephone conference, the Examiner seemed to agree with the Applicant that the proposed amendments in claim 1 would overcome the rejections by the combination of Neumann and Jarvis, and therefore, the amended claim 1 should be allowable.

The Applicant had also discussed with the Examiner the matter with regard to the rejection of claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 for allegedly failing to comply with the enablement requirement under 35 U.S.C. § 112, first paragraph. It is also Applicant's understanding that the Examiner had expressed that he had reconsidered Applicant's arguments in the corresponding section of the 3/10/2010 response, and had found that the arguments were persuasive. Therefore, the Applicant respectfully requests that the rejection of claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph be withdrawn.

Consistent with the amendments to claim 1, the Applicant has amended both the affected independent and dependent claims in the pending RCE response, and the Applicant respectfully submits that claims 1-43 should now be in condition for allowance, based on the following amendments and remarks.

## **II. Claim Rejections under 35 U.S.C. § 112**

Claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are rejected for allegedly failing to comply with the enablement requirement under 35 U.S.C. § 112, first paragraph. The Applicant respectfully disagrees and maintains the arguments in the corresponding section of the 3/30/10 response. In addition, it is the Applicant's understanding that the Examiner had expressed that he had reconsidered Applicant's arguments in the corresponding section of the 3/10/2010 response, and had found that the arguments deemed persuasive. Therefore, the Applicant respectfully requests that the rejection of claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph be withdrawn.

### **CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that

“the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

### **III. The Proposed Combination of Neumann and Jarvis Does Not Render Claims 1-5, 8-12, 14, 20-24 and 27 Unpatentable**

The Applicant turns to the rejection of claims 1-5, 8-12, 14, 20-24 and 27 as being unpatentable over Neumann in view of Jarvis.

#### **A. Rejection of Independent Claims 1, 9 and 20**

With respect to the rejection of claim 1 under 35 U.S.C. § 103(a), the Applicant has amended claim 1, and submits that the combination of Jarvis and Neumann does not disclose or suggest at least "said host baseband processor is operable to time synchronize said second wireless communication system to said first wireless communications system based on timing information transferred to said host baseband processor from said baseband co-processor," as recited in Applicant's claim 1.

The Final Office Action states the following:

“Referring to claim 1, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 4), comprising a host baseband processor configured to operate in accordance with a first wireless communications protocol of a first wireless communications system (figures 2-8B, paragraphs 19-21, "first and second baseband processors", "GSM", "TDMA"), and a baseband co-processor configured to operate in accordance with a second wireless communications protocol of a second wireless communications system (figures 2-8B, paragraphs 19-21, 38, 34, 30, 25, "first and second baseband processors", "GSM", "TDMA").

Neumann does not specifically disclose the host baseband processor enabling timing synchronization between the first and second wireless communication systems on the basis of timing information transferred to the host baseband processor from the baseband co-processor as claimed.”

See Final Office Action at page 4. The Examiner relies for support on Neumann’s Figs. 1 and 2, and equates Neumann’s dual network wireless telephone to Applicant’s “multi-mode wireless communication device”. The Examiner also equates Neumann’s GSM master processor 202 and TDMA co-processor 204 to Applicant’s “host baseband processor” and “baseband co-processor”, respectively. The Examiner further equates Neumann’s GSM network to Applicant’s first wireless communication system operating a first wireless communication protocol, and Neumann’s TDMA network to Applicant’s second wireless communication system operating a second wireless communication protocol.

The Examiner concedes that Neumann is silent on how the GSM baseband processor (the alleged “host baseband processor”) and the TDMA co-processor (the alleged “baseband co-processor”) are synchronized, since each operates in a different

communication wireless system, namely, the GSM and the TDMA systems, respectively.

The Examiner looks to Jarvis to overcome Neumann's above deficiencies. The Final Office Action states the following:

"Jarvis discloses a processor enabling timing synchronization between two network systems on the basis of timing information sent from another processor (Figures 1-5b, abstract, col. 2, lines 7-21 and 45-65, col. 3, and lines 35-67).

It would have been obvious to one of the ordinary skill in the art the time of invention to modify the device of Neumann as claimed by incorporating the teachings of Jarvis, for the purpose of providing a reliable and efficient communication system."

See Final Office Action at page 4. Specifically, referring to Jarvis' Fig. 1, the Examiner seems to equate Jarvis' master processor M (one of Jarvis' interface 30 and packet processor 32) to the alleged "host baseband processor", and Jarvis' slave processor S (remaining one of Jarvis' interface 30 and packet processor 32) to the alleged "baseband co-processor". The Examiner (see page 4 in Final Office Action) relies for support on Jarvis (see Jarvis' Fig. 1-5b, abstract, col. 2, ll 7-21, 45-65 and col. 3, ll 35-67), and alleges that Jarvis discloses "a processor enabling timing synchronization between **two network systems** on the basis of **timing information sent from another processor**".

The Applicant respectfully disagrees. Nevertheless, Applicant's claim 1 has been amended for clarification, which now reads "said **host baseband processor** is operable to **time synchronize said second wireless communications system to said first**

**wireless communications system** based on timing information **transferred to** said host baseband processor **from** said baseband co-processor”. Specifically, the Applicant points out that Jarvis does not disclose Applicant’s following claim limitations:

(1) The Applicant points out that Jarvis (see Fig. 1) discloses that the timing synchronization takes place within a same network 13 or 15 (i.e., not between two communication systems). More specifically, the Examiner is referred to the following citations of Jarvis:

“The routing system 10 includes a number of linecards (only two illustrated) 12,14 **each of which is connected to a corresponding network 13,15 of various types**. The linecards 12,14 are each responsible for interfacing with the **particular type of network to which they are attached**. For example, **linecard 12 may interface with an FDDI optical fibre network 13, and linecard 14 might interface with an Ethernet type network 15**. The linecards 12,14 are mutually connected over a high speed bus 24.”

See Jarvis at col. 2, lines 12-21 (emphasis added). Jarvis (see Fig. 1) clearly discloses that each line card (e.g., linecard 12) is connected to a corresponding network (e.g., optical fibre network 13). Jarvis also discloses that each line card includes two alleged processors, namely, the interface 30 and the packet processor 32, which are utilized for timing synchronization within the same single network 13.

In this regards, the Applicant submits that Jarvis does not disclose or suggest the alleged “**multi-mode** wireless communication device”, let alone disclose “**time synchronize said second wireless communications system to said first wireless communications system,...**” as recited in Applicant’s claim 1.

In addition, the Applicant also points out that even though Neumann discloses such limitation, nevertheless, Jarvis's timing synchronization method within a single communications system, if applied to Neumann's GSM and TDMA communication systems, might render Neumann's timing synchronization to either one of the GSM network or the TDMA network only, but not both. Jarvis simply does not disclose or suggest utilizing the two processors in the line card 12 to time synchronize different network systems, such as Neumann's GSM and TDMA wireless communication systems..

(2) Jarvis (see Jarvis at col. 2, lines 12-21 ) discloses that the network 13 is an optical fiber network (or network 15 is an Ethernet network). **However, neither the optical fiber network or the wired Ethernet network is a wireless communication system.** In this regard, Jarvis also does not disclose or suggest the alleged "first **wireless** communications system" and the "second **wireless** communications system". Likewise, even though Neumann discloses such limitation (i.e., the GSM and TDMA wireless network), nevertheless, timing synchronization of wireless communication networks has considerable different requirements than those of Jarvis' optical fiber network or the wired Ethernet network. In other words, Jarvis' timing synchronization in either Jarvis' optical fiber network or the wired Ethernet network would not achieve reasonable success to Neumann's GSM and TDMA **wireless** communication networks, if combined (see MPEP 2143.02).



(3) Even assuming that Jarvis' **non-wireless and single communication system timing synchronization** is applicable to Neumann's GSM and TDMA wireless communication systems (which the Applicant contends that Jarvis is not applicable), Jarvis still does not disclose "**said host baseband processor is operable to time synchronize said second wireless communications system to said first wireless communications system based on timing information transferred to said host baseband processor from said baseband co-processor**," as recited in Applicant's claim 1.

Specifically, the Examiner is referred to the following citation of Jarvis:

"In the synchronization scheme according to the present invention, **the processor, or timer which initiates the synchronization operation is hereinafter referred to as the master M and the processor responding to the synchronization operation is referred to as the slave S**. The identification of which processor is to be master or slave is arbitrary to the present invention, and may be determined by many other factors.

With reference to FIG. 2, the **synchronization operation is initiated by the master** according to some predetermined criteria. For example, the synchronization may take place at routine intervals. At the outset of the synchronization operation, **the master M issues to the slave S, a data packet containing a synchronization request and its current time value Mc (step 50)**. The master M then awaits a response from slave S.

The slave S receives the synchronization request and compares the issued master time value  $M_o$  with its own current slave time value  $S_o$  (step 52). Three possible outcomes may arise from this comparison."

See Jarvis at col. 3, lines 48-67 (emphasis added). Jarvis discloses that **the master processor M** (the alleged "host baseband processor") **initiates timing synchronization by issuing (sending) its own timing value  $M_o$**  (the alleged "timing

**information”) to the slave processor S** (the alleged “baseband co-processor”). The slave processor then compares its timing value  $S_o$  with the master processor’s timing value  $M_o$ . Based on the results of comparison, the slave processor S sends an acknowledgement to the master processor M, which both the master processor M and the slave processor S will both synchronize to the higher timing value (i.e., the  $M_o$  or  $S_o$ ) (see Jarvis, col. 4, lines 1-44).

In other words, Jarvis discloses that the Master processor (the alleged “host baseband processor”) performs the alleged timing synchronization based on sending its own timing information to the slave processor S (the alleged “baseband co-processor”), instead of receiving timing information from the slave processor S. Therefore, the Applicant maintains that Jarvis still does not disclose **“said host baseband processor is operable to time synchronize said second wireless communications system to said first wireless communications system based on timing information transferred to said host baseband processor from said baseband co-processor,”** as recited in Applicant’s claim 1.

Based on the foregoing rationale, the Applicant maintains that the combination of Neumann and Jarvis does not establish a prima facie case of obviousness to render Applicant’s claim 1 unpatentable, and claim 1 is submitted to be allowable. Independent claims 9 and 20 are similar in many respects to the device disclosed in independent claim 1. Therefore, the Appellant submits that independent claims 9 and 20 are also

allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

**B. Rejection of Dependent Claims 2-5, 8, 10-12, 14, 21-24, and 27**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Neumann in view of Jarvis has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-5, 8, 10-12, 14, 21-24, and 27 depend from independent claims 1, 9 and 20, respectively, and are also respectfully submitted to be allowable.

**IV. The Proposed Combination of Neumann, Jarvis and Russ Does Not Render Claims 15-18 Unpatentable**

The Applicant turns to the rejection of claims 15-18 as being unpatentable over Neumann, Jarvis and in view of Russ.

**A. Rejection of Independent Claim 15**

With regard to the rejection of independent claim 15 under 35 U.S.C. § 103(a), the Applicant submits that the combination of Neumann and Jarvis does not disclose or suggest at least the limitation of “**generating within a multi-mode communication device, a timer capture interrupt during a predetermined timing phase** of a first wireless communication system,” or “**...determining by said host baseband processor a timing relationship for synchronizing** said second wireless

communication system to said first wireless communication system, **based upon said received timer value from said baseband co-processor,**" as recited by the Applicant in independent claim 15.

In regard to claim 15, the Final Office Action, at page 8, concedes the following:

"Neumann does not specifically discuss synchronization details e.g., generating a timer capture interrupt during a predetermined timing phase of a first wireless communication system, storing a timer value of at least one time pertinent to operation of the second wireless communication system in response to the timer capture interrupt; reading the timer value; and determining a timing relationship between the first and second wireless communication systems based upon the timer value in the format claimed by applicant."

The Examiner then relies on Jarvis for the deficiencies of Neumann, and states the following (see the Office Action, at page 8):

"Jarvis discloses generating a timer capture interrupt during a predetermined timing phase of a first communication system (Figures 2-5b and col. 3, lines 59-63, col. 4, lines 1-44, col. 5, lines 1-16, "master M issues to the slave S, a data packet containing a synchronization request and its current time value Mo" ), storing a timer value of at least one time pertinent to operation of said second wireless communication system in response to said timer capture interrupt (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16, "So"); reading said timer value (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16, "compares the issued master time value", note that **comparing implies reading**); and **determining a timing relationship between said first and second wireless communication systems based upon said timer value** (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16)."

See *id.* (emphasis added). The Applicant respectfully disagrees, and refers the Examiner to Applicant's above arguments # (1)-(3) in section III, that **Jarvis's timer synchronization** (the alleged "timing synchronization") **takes place within the same**

**single communication system**, and Jarvis' timing synchronization is based on the master processor M's own timing information instead of the slave processor S. In this regard, Jarvis does not overcome Neumann's above deficiency by disclosing or suggesting "...**determining by said host baseband processor a timing relationship for synchronizing** said second wireless communication system to said first wireless communication system, **based upon said received timer value from said baseband co-processor**," as recited by the Applicant in independent claim 15.

In addition, with regard to Neumann and Jarvis' above deficiency, namely, **"generating within a multi-mode communication device, a timer capture interrupt during a predetermined timing phase of a first wireless communication system,"** the Examiner relies on Russ and states the following (see the Office Action, at page 9):

"However, generating a timer capture interrupt is commonly used with timing synchronization, and it is conventional in the art, as disclosed by Russ. Russ discloses implementing timer capture interrupt in synchronizing an output timer interrupt (Col. 1, lines 45-67, "According to the present invention an input capture timer interrupt **responds to the rising edge of the speed signal** and is used to synchronize an output compare timer interrupt that is scheduled to occur at a fixed time interval (every 2.048 milliseconds). Each time an input capture interrupt occurs a new measurement period IS started").

The Applicant points out that Russ merely discloses **a synchronous speed measurement** by comparing triggering (the alleged "timer capture interrupt") successive rising edges of an actual speed input with a fixed period (i.e., a time interval of 2.048 milliseconds). In other words, Russ's triggering (the alleged "timer capture interrupt") is

an internal **synchronous speed measurement** reading, **which is not applicable to a communication device**. In this regard, Russ, likewise, is not a combinable reference with Neumann and Jarvis to establish a prima facie case of obviousness to reject Applicant's claim 15. The Applicant submits that claim 15 is allowable.

**B. Rejection of Dependent Claims 16-18**

Based on at least the foregoing, the Applicant believes the rejection of independent claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, and Russ has been overcome and requests that the rejection be withdrawn. Additionally, claims 16-18 depend from independent claim 15, respectively, and are also respectfully submitted to be allowable.

**V. The Proposed Combination of Neumann, Jarvis, Russ and MPEP 2144.03 Does Not Render Claim 19 Unpatentable**

Based on at least the foregoing, the Applicant believes the rejection of independent claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis in view of Russ has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 does not overcome the deficiencies of Neumann, Jarvis and Russ. Claim 19 depend from independent claim 15, respectively, and is, consequently, also respectfully submitted to be allowable.

**VI. The Proposed Combination of Neumann, Jarvis, Russ and MPEP 2144.03 Does Not Render Claim 6, 13 and 25 Unpatentable**

Claims 6, 13, 19, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, Russ and further in view of MPEP 2144.03. Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 does not overcome the deficiencies of Neumann, Jarvis and Russ, respectively, claims 6, 13, 19, and 25 depend from independent claims 1, 9, 15, and 20, respectively, and are, consequently, also respectfully submitted to be allowable.

**VII. The Proposed Combination of Neumann, Jarvis, MPEP 2144.03 and Kawai Does Not Render Claim 7 and 26 Unpatentable**

Claims 7 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, in view of Jarvis, and further in view of MPEP 2144.03 and Kawai. Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 and Kawai do not overcome the deficiencies of Neumann and Jarvis, claims 7 and 26 depend from independent claims 1 and 20, respectively, and are, consequently, also respectfully submitted to be allowable.

**VIII. Rejection to Claims 28-43**

Claims 28-43 are rejected for the same rationale as used for claims 1-27. Since the Examiner has not provided any additional arguments for the rejection of claims 28-

43, the Applicant submits that these claims are allowable at least for the reasons stated above regarding the allowability of claims 1-27.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1-43.



**CONCLUSION**

Based on at least the foregoing, the Applicant believes that all claims 1-43 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Patent Agent at (312) 775-8093.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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